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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Carl Q. Howard
Serial Number: 10/585,386
Filed: 07/06/2006
Group Art Unit: 3651
Examiner: Hess, Douglas A.
Title: DEVICE TO REDUCE NOISE TRANSMISSION
THROUGH THE GAP BETWEEN ESCALATOR STEPS

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Appellant now submits its brief in this appeal. A Credit Card Payment Form in the amount of \$540.00 is attached. The Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds for any additional fees or credit the account for any overpayment.

Real Party in Interest

Otis Elevator Company is the Assignee of this application. Otis Elevator Company is a business unit of United Technologies Corporation.

Related Appeals and Interferences

There are no related appeals or interferences.

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Status of the Claims

Claims 1-3, 5-11 and 16-25 are pending and on appeal.

Claims 4 and 12-15 have been cancelled.

Claims 1-3, 5-11 and 16-25 stand rejected under 35 U.S.C. §112, second paragraph.

Claims 1-3, 5-11 and 16-25 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,042,641 (the "Soldat" reference).

Status of Amendments

There are no unentered amendments.

Summary of Claimed Subject Matter

The independent claims and dependent claims that are argued separately are reproduced below annotated with reference numbers from the drawings and locations from the specification where example embodiments upon which those claims read are described. All reference numbers are used, for example, in Figures 3 and 4.

1. A passenger conveyer system (10) comprising:
 - a first step (24; page 3, line 29);
 - a second step (30) adjacent the first step (24) with a spacing (36) at an interface between the first step (24) and the second step (30; page 3, lines 29-30);
 - a sound transmission reducing member (40, 50) associated with the interface to at least partially obstruct a sound pathway that includes the spacing (36; page 4, lines 3-7); and
 - a sound insulating material (46) that is distinct from the sound transmission reducing member supported on an underside of each step (page 4, lines 21-23).
16. A method of reducing sound in a conveyer system (10) having a plurality of steps (14, 24, 30) with a spacing (36) at an interface between the steps (page 3, lines 29-30) comprising:
 - forming a sound transmission reducing member (40, 50) on at least one of the steps as part of the one of the steps and made of the same material as the one of the steps to at least partially obstruct a sound pathway through the spacing (36; page 4, lines 3-15).

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17. The method of claim 16, including attaching another sound transmission reducing member (40, 50) to the step (page 4, lines 21-23).

19. The method of claim 16, including providing sound absorbing material (46) on a side of the step that faces a sound source (page 4, lines 21-23).

21. A passenger conveyor system comprising:
a first step (24; page 3, line 29);
a second step (30) adjacent the first step with a spacing (36) at an interface between the first step and the second step (page 3, lines 29-30); and
a lip (40) formed on at least one of the steps to be a part of the one of the steps and made of the same material as the one of the steps, the lip being positioned relative to the interface to at least partially obstruct a sound pathway that includes the spacing such that the lip is operative as a sound transmission reducing member (page 4, lines 3-15).

22. The passenger conveyor system of claim 21, comprising
a step insulating material (46) that is different than the material of the steps supported on an underside of each step (page 4, lines 21-23).

Grounds of Rejection to be Reviewed on Appeal

Claims 1-3, 5-11 and 16-25 stand rejected under 35 U.S.C. §112, second paragraph.

Claims 1-3, 5-11 and 16-25 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,042,641 (the "Soldat" reference).

ARGUMENT

The claims are clear and the rejection under 35 U.S.C. §112 must be reversed. Additionally, there is no *prima facie* case of obviousness against any of Appellant's claims because the Examiner's proposed modification cannot be made.

The rejection of claims 1-3, 5-11 and 16-25 under 35 U.S.C. §112 must be reversed.

The Examiner has rejected the claims under 35 U.S.C. §112, second paragraph, alleging that they fail to particularly point out the claimed subject matter. Appellant respectfully disagrees. The claims are clear on their face. Selected portions of a passenger conveyor system have been

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recited in the claims because those are the portions that are of interest with regard to Appellant's invention. The Examiner's suggestion that other elements are required such as would be found in a passenger conveyor system does not correspond to the requirements of the statute. The claims must be clear and particularly point out the claimed subject matter. Appellant's claims do exactly that.

The Examiner's suggestion for adding other passenger conveyor components is arbitrary, at best. For example, the Examiner suggests that a motor or transmission means or attachment means and moving the steps are all required. Even adding those would not recite every possible component of a hypothetical conveyor system. Handrails, balustrades and other components are typically included in a passenger conveyor system. There is no need to recite those elements, either. An applicant does not need to recite every possible component of a device or arrangement that is contemplated by terms included in the preamble. Instead, the applicant should recite those portions of such an arrangement that are relevant to the claimed invention. That is exactly what Appellant has done in this case.

There is nothing about the claims that renders them unclear or in any way unable to be understood by a person of skill in the art. The requirements of 35 U.S.C. §112, second paragraph, are satisfied and the claims are clear. The rejection must be withdrawn.¹

**The rejection of claims 1-3, 5-11 and 16-25
under 35 U.S.C. §103 must be withdrawn.**

The Examiner's proposed modification to the *Soldat* reference cannot be made. Where a proposed modification would render the arrangement of a reference unsatisfactory for its intended purpose or incapable of achieving its intended result, the modification cannot be made when

¹ The Examiner did not make any §112 rejection in the first action but only made the outstanding rejection in the final action when Applicant is not able to amend (if that were necessary but it is not).

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attempting to establish a *prima facie* case of obviousness. MPEP 2143.01(V) and (VI) explains this.

Additionally, for some of Appellant's claims to be considered obvious, an addition would have to be made to the *Soldat* reference that is not in any way suggested by that reference and that would not provide any benefit for the purposes described in the *Soldat* reference. Without any suggestion or any benefit to the addition that would have to be made to the *Soldat* reference if the Examiner were to hope to establish a *prima facie* case of obviousness, the legally required reason for making such an addition is missing and there is no *prima facie* case of obviousness.

Claim 1 is allowable.

With regard to claim 1, a sound transmission reducing member that at least partially obstructs a sound pathway that includes a spacing between steps must be found in the *Soldat* reference. The Examiner proposes that the brush 2, corresponds to the sound transmission reducing member of claim 1. Claim 1 also includes a sound insulating material that is distinct from the sound transmission reducing member. There is no such sound insulating material in the *Soldat* reference. This is no surprise because a sound insulating material would not have any benefit in the context of the *Soldat* reference. The goal of cleaning the riser surfaces of the steps using the brush 2, 3 of the *Soldat* reference would not in any way be served by adding a sound insulating material as required by Appellant's claim 1.

The Examiner does not even propose any reason for how the *Soldat* reference in any way suggests making such a modification to that reference. Moreover, the Examiner is unable to provide any legally sufficient reason to add a sound insulating material to the *Soldat* arrangement when such a material has no benefit or usefulness in the context of achieving the intended result of

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the *Soldat* reference. Without any such benefit, there is no *prima facie* case of obviousness because the proposed modification cannot be made.

The Examiner cannot construe the channel into which the brush 2, 3 is received in the *Soldat* reference as the claimed sound transmission reducing member. That channel is not in a position to at least partially obstruct a pathway that includes the spacing between the steps. As is clear from the drawings, the channel that receives the brush 2, 3 is too far centrally beneath the tread and does not in any way obstruct the spacing between the steps in the *Soldat* reference.

Given that one of the elements of claim 1 cannot be found anywhere within the *Soldat* reference and there would be no benefit to adding it from some other hypothetical reference, there is no *prima facie* case of obviousness. The rejection of claim 1 must be reversed.

Claim 16 is allowable.

Claim 16 includes forming a sound transmission reducing member on at least one of the steps as part of one of the steps and made of the same material as the one of the steps. There is no such sound transmission reducing member in the *Soldat* reference. The Examiner points to the brush 2, 3 as a sound transmission reducing member in the *Soldat* reference. That is not, however, formed as part of one of the steps nor is it made of the same material as the one of the steps. It is not possible to change the arrangement of the *Soldat* reference to be consistent with Appellant's claim 16 because that would render it incapable of achieving its intended result.

The bristles 3 cannot be made of the same material as the steps (e.g., metal) because that would result in scratching the riser of the step rather than sweeping it clean. Scratching the front surface of a riser of a step does not facilitate cleaning it to improve its appearance but, instead, would effectively ruin the appearance by scratching it. It is not possible to change the bristles 3 of the brush in the *Soldat* reference to be made of the same material as the steps without rendering the

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Soldat reference ineffective for its intended purpose and unable to achieve its intended result. As explained in MPEP 2143.01(V) and (VI), such a modification to a reference cannot be made when attempting to establish a *prima facie* case of obviousness.

Additionally, the process for forming an escalator step as taught in the *Soldat* reference could not be used to make or form a brush 2, 3 as required by the *Soldat* reference. Even if the brush 2, 3 could somehow be of the same material as the step, it is not possible to cast a brush using a metal casting process, mold the brush 2,3 using a metal molding process or to machine metal stock to form the brush 2, 3. It is impossible to practice the method of claim 16 and to get the result required by the *Soldat* reference without completely redesigning the steps of that reference and then still adding the brush 2, 3 (unmodified) to achieve *Soldat's* intended result.

As the Examiner's proposed modification to the *Soldat* reference cannot be made, there is no *prima facie* case of obviousness. The rejection of claim 16 must be reversed.

Claim 17 is patentable.

Claim 17 adds another sound transmission reducing member to the step. There is no benefit to adding another sound transmission reducing member to the steps in the *Soldat* reference. The Examiner contends that the brush 2, 3 can be interpreted as a sound transmission reducing member. Assuming that is a reasonable interpretation, the *Soldat* reference teaches that the brush 2, 3 extends across the entire width of each step. It is of no benefit or use to duplicate the brush 2, 3 or to add any additional brushes to the *Soldat* reference because the brush 2, 3 already achieves its intended result and serves the purpose required as taught by the *Soldat* reference. Adding another brush 2, 3 would be redundant, at best. Moreover, the *Soldat* reference does not have anything to do with sound transmission reduction. Instead, it is concerned with cleaning the riser surface of the step. It follows that adding another member that could be construed as a sound transmission reducing

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member would not provide any benefit in the context of the *Soldat* reference. Therefore, there is no legally sufficient reason for making such an addition. There is no *prima facie* case of obviousness against claim 17 and the rejection must be reversed.

Claim 19 is allowable.

Claim 19 adds sound absorbing material provided on a side of a step that faces a sound source. There is no suggestion whatsoever for how such a material would be useful in the *Soldat* reference. Such a material has nothing to do with cleaning the riser surface of the steps, which is the goal and the end result of the *Soldat* reference. Without any benefit or usefulness for adding a sound absorbing material to a step in the *Soldat* reference, such a modification cannot be made. There is no *prima facie* case of obviousness against claim 19 and the rejection must be reversed.

Claim 21 is allowable.

Claim 21 includes a lip formed on a step that is part of the step and made of the same material as the step. The Examiner has not clearly explained whether the brush 2, 3 or the channel receiving the brush renders such a lip obvious. In either case, Appellant respectfully disagrees.

As explained above, in order for the brush 2,3 to be consistent with the lip of Appellant's claim 21, the brush would have to be changed to be made part of the step and to be made of the same material as the step (e.g., metal). Such a modification would render the brush 2, 3 incapable of achieving its intended result for the reasons already described. That proposed modification to the *Soldat* reference cannot be made. There is no way to modify the brush 2, 3 of the *Soldat* reference to make it consistent with the lip of Appellant's claim 21 for purposes of attempting to manufacture a *prima facie* case of obviousness.

Similarly, the channel that receives the brush 2, 3 does not correspond to the lip of Appellant's claim 21. That channel is not in a position to obstruct a pathway that includes the

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spacing and it is not operative as a sound transmission reducing member as required by claim 21. Without anything corresponding to the lip recited in claim 21, there is no *prima facie* case of obviousness.

The rejection of claim 21 must be withdrawn.

Claim 22 is allowable.

Claim 22 adds a step insulating material that is different from the material of the steps supported on an underside of each step. This insulating material is in addition to the lip recited in claim 21. There is no reason for adding such a material to the *Soldat* reference and, therefore, the proposed modification cannot be made. Even if it were possible to find a "lip" within the *Soldat* reference consistent with the lip as recited in Appellant's claim 21, there is no benefit or legally sufficient reason for adding an insulating material as recited in claim 22. The *Soldat* reference has nothing to do with sound transmission reduction but is only concerned with cleaning the surface on the steps. Therefore, there is no *prima facie* case of obviousness because the proposed modification cannot be made. The rejection must be withdrawn.

CONCLUSION

The claims satisfy the requirements of 35 U.S.C. §112, second paragraph. The elements recited in the claims are clear and particularly point out that which Appellant regards as the claimed invention. The rejection under 35 U.S.C. §112 must be withdrawn. As explained above, there are

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several reasons why there is no *prima facie* case of obviousness against any of Appellant's claims.

The rejection under 35 U.S.C. §103 must be withdrawn.

Respectfully submitted,

CARLSON, GASKEY & OLDS, P.C.

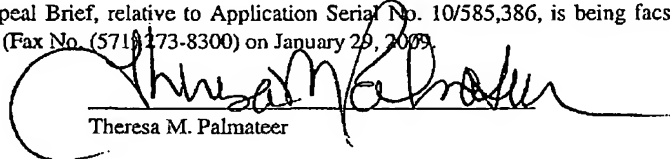
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CERTIFICATE OF FACSIMILE

I hereby certify that this Appeal Brief, relative to Application Serial No. 10/585,386, is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on January 29, 2009.



Theresa M. Palmateer

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1. A passenger conveyer system comprising:
a first step;
a second step adjacent the first step with a spacing at an interface between the first step and the second step;
a sound transmission reducing member associated with the interface to at least partially obstruct a sound pathway that includes the spacing; and
a sound insulating material that is distinct from the sound transmission reducing member supported on an underside of each step.
2. The conveyer system of claim 1, wherein the sound transmission reducing member is attached to at least one of the steps.
3. The conveyer system of claim 1, wherein the sound transmission reducing member is formed as a part of at least one of the steps.
5. The conveyer system of claim 1, wherein the sound insulating material comprises foam.
6. The conveyer system of claim 1, wherein the sound transmission reducing member comprises a lip extending from an end of one of the steps.
7. The conveyer system of claim 6, wherein the lip is integrally formed as part of the step.
8. The conveyer system of claim 1, wherein the sound transmission reducing member comprises a seal supported by one of the steps and having a portion extending across the spacing.
9. The conveyer system of claim 8, wherein the seal is a solid material.
10. The conveyer system of claim 1, wherein the seal comprises a brush strip having a portion extending across the spacing.

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11. The conveyor system of claim 1, wherein the sound transmission reducing member eliminates a direct transmission pathway that includes the spacing.

16. A method of reducing sound in a conveyer system having a plurality of steps with a spacing at an interface between the steps comprising:

forming a sound transmission reducing member on at least one of the steps as a part of the one of the steps and made of the same material as the one of the steps to at least partially obstruct a sound pathway through the spacing.

17. The method of claim 16, including attaching another sound transmission reducing member to the step.

18. The method of claim 16, including obstructing the spacing with a sound sealing device.

19. The method of claim 16, including providing sound absorbing material on a side of the step that faces a sound source.

20. The method of claim 16 including eliminating a direct sound transmission path through the spacing.

21. A passenger conveyor system comprising:

a first step;

a second step adjacent the first step with a spacing at an interface between the first step and the second step; and

a lip formed on at least one of the steps to be a part of the one of the steps and made of the same material as the one of the steps, the lip being positioned relative to the interface to at least partially obstruct a sound pathway that includes the spacing such that the lip is operative as a sound transmission reducing member.

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22. The passenger conveyor system of claim 21, comprising .
a step insulating material that is different than the material of the steps supported on an underside of each step.
23. The passenger conveyor system of claim 22, wherein the sound insulating material comprises foam.
24. The passenger conveyor system of claim 21, comprising another sound transmission reducing member supported by one of the steps and having a portion extending across the spacing.
25. The passenger conveyor system of claim 24, wherein the other sound transmission reducing member comprises one of a solid material or a brush strip.

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EVIDENCE APPENDIX

None.

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RELATED PROCEEDINGS APPENDIX

None.